Teleoncology Program Evaluation: Shepherding in a new form of health care delivery Maria Matthews, PhD; Ann Ryan, MSc; Montgomery Keough, BSc; Sara Heath, BSc
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What is the issue?
Telehealth, also known as telemedicine or e-health, is “the use of information and communication to deliver health services, expertise and information over distance, geographic, time, social and cultural barriers.” Telehealth is used when the traditional deliveries of health services are hindered by distance and lack of local specialist clinicians to provide quality care to those in need. It can increase the frequency of patient contact through quick responses from physicians, and reduce travel costs and time through facilitating at-home care. Telehealth technology is used by many different professionals for many purposes.

Telehealth is increasingly used to deliver care services. It can be used for diagnosis and for specialized treatment such as dialysis. Telehealth has been used to diagnose and follow-up patients, including patients with cancer. Rural physicians are less isolated, and can learn new oncology techniques and methods of treatment. All of this can aid in the reduction of cancer mortality and morbidity. Telehealth has also been used for continuing education of health professionals.

The Newfoundland and Labrador Teleoncology Program (NLTOP) was introduced in early 2003. It was developed to address services gaps, particularly among rural health care providers who deliver cancer services such as follow-up medical visits, consultations, and chemotherapy for people of their regions. The team members were: Dr. A.M. House, Dr. K. Laing, Dr. J. Greenland, Dr. M. Zulfiqar, and Ms. P. Dwyer.

From the beginning of the project, an external evaluation had been planned to determine how well the program was meeting its goals and to know the views of the people who were the primary users of the program.
**How did we do our study?**
We collected the data using both quantitative and qualitative methods.

**Quantitative**
A patient satisfaction survey, program bookings and participation logs were recorded by NLTOP staff. These files were given to the Health Research Unit (HRU), imported into SPSS, cleaned extensively for consistency, and variables modified for a clearer analysis.

**Qualitative**
We took the comments and messages recorded by the NLTOP staff and answers to the patient satisfaction survey’s open-ended questions, and entered them into WORD. These comments and answers were analyzed for themes and then grouped into theme categories.

We also held key informant interviews with 12 health care providers who used the NLTOP and staff who ran it. Ten key informants answered the clinical application questions and 8 answered the educational application questions; 6 completed both the educational and the clinical in the same interview.

**What did we find?**
Overall, there is widespread support and satisfaction with the use of telehealth services to deliver oncology services. The Teleoncology Program was found to be:

- acceptable to both patients and care providers in the delivery of clinical services,
- a substantial resource for continued education programs, particularly to health professionals practicing in rural and remote areas of the province.

The Teleoncology Program is generally viewed as cost saving (in terms of travel and time and expense), convenient, satisfactory to both patients and health care providers and, in some cases, facilitating more timely care. In terms of education, the Teleoncology Program was again noted for its ability to offer continuing education across the province with the added benefit of increasing networking opportunities and a feeling of connectivity among rural health professionals.

Most users felt the biggest strength of the program was its savings in costs and time traveled to provide/receive care. Some physicians do monthly site visits, which can be costly both in terms of finances and time, but with the Teleoncology Program the cost incurred is reduced to the patient and to the physician. This is particularly relevant for patients traveling from Labrador, often at great personal cost, not only for transportation but also accommodations. These savings, in cost and time, relieve already heavily burdened cancer patients.
However, there were several areas in need of improvement:

**Need for ongoing upgrading and investment in technology**

Both professionals and patients reported connection problems such as delayed audio, low volume, and poor image quality.

**Need for better promotion of the telehealth services.**

Though people are interested in professional development, many do not realize that video/teleconferencing is a viable option for educational sessions. There were also situations where the patient was interested in using the NLTOP program but their attending physician was not.

**Need for guidelines to ensure ethical practice**

Education sessions such as Rounds, where several remote sites are simultaneously linked to discuss particular cases, can be at risk of breaching confidentiality. This happens when a site link remains active even though there are no participants at the site room.

**Need for dedicated staff throughout the province**

- Areas where there is no dedicated nurse to the program can have a negative impact on the patient’s experience with the program. And one or two negative experiences can impact a patient’s willingness to use the system again.
- When technical issues arose, the lack of an individual to help can make the session difficult, especially in remote areas.

**WHAT DO WE FEEL ARE THE KEY RECOMMENDATIONS?**

**Upgrade equipment**

- Many of the technical problems encountered may be resolved by upgrading the equipment.
- Specific suggestions to improve equipment included a better bandwidth and more compatible equipment at all the sites, or using equipment already available through the regional boards and not bridge through TETRA.
- To improve the screen size issue it was suggested that two separate screens be utilized; the audio issue may be resolved by requiring everyone to wear a microphone, or by having one microphone that everyone has to use to ask questions.

**Promote telehealth services and educate potential users**

- The Teleoncology Program should actively promote their service to highlight the importance and convenience of the program with patients and with health care providers, both clinically and educationally.
- Program demonstrations were mentioned as a successful promotional method used by other provinces.

**Confidentiality**

Have an automatic shut down when no one is on site using the system.
Dedicate more human resources and improved scheduling

- A master schedule for each teleoncology clinic would allow for appropriate dedicated personnel for patient support. For example, coordinating sessions so that patients can have a nurse present for support and assessment.
- Greater technical support in the linked areas will help isolate and resolve technical problems.
- Scheduling sessions more than 5 minutes apart would improve on the prevailing feeling of rushing through appointments.
- For northern communities where there is a greater chance of patients being delayed due to weather, scheduling appointments for later in the day would benefit all.
- Schedulers should be aware of the 30 minute time zone difference between the island portion of the province and most of Labrador.
- For educational sessions, using local site coordinator(s) was suggested as an ideal way to improve scheduling issues, make room bookings, and ensure that participants attend the sessions. These site coordinators would report to an overall coordinator.

Additional Information


www.med.mun.ca/ehru/pages/projects.asp


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Questions?

Please contact:

A.M. House, O.C., M.D., LLD, FRCPC
Principal Investigator Professor Emeritus and Honorary Research Professor Faculty of Medicine, MUN

(709) 777-8837
maxhouse@mun.ca